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Biobased Industry Opportunity Scan: Phase 1 Results

Governor's Consortium on Biobased Industry
August 29, 2005

YOUR PARTNERS IN ENERGY RESEARCH, EDUCATION & CONSULTING

“Develop a leading-edge Wisconsin biorefining industry over the next 10 years”

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- **Project team**
  - **Energy Center of Wisconsin**
  - **Center for Technology Transfer**
  - **Center on Wisconsin Strategy**
  - **GDS Associates**
  - **Resource Strategies, Inc.**

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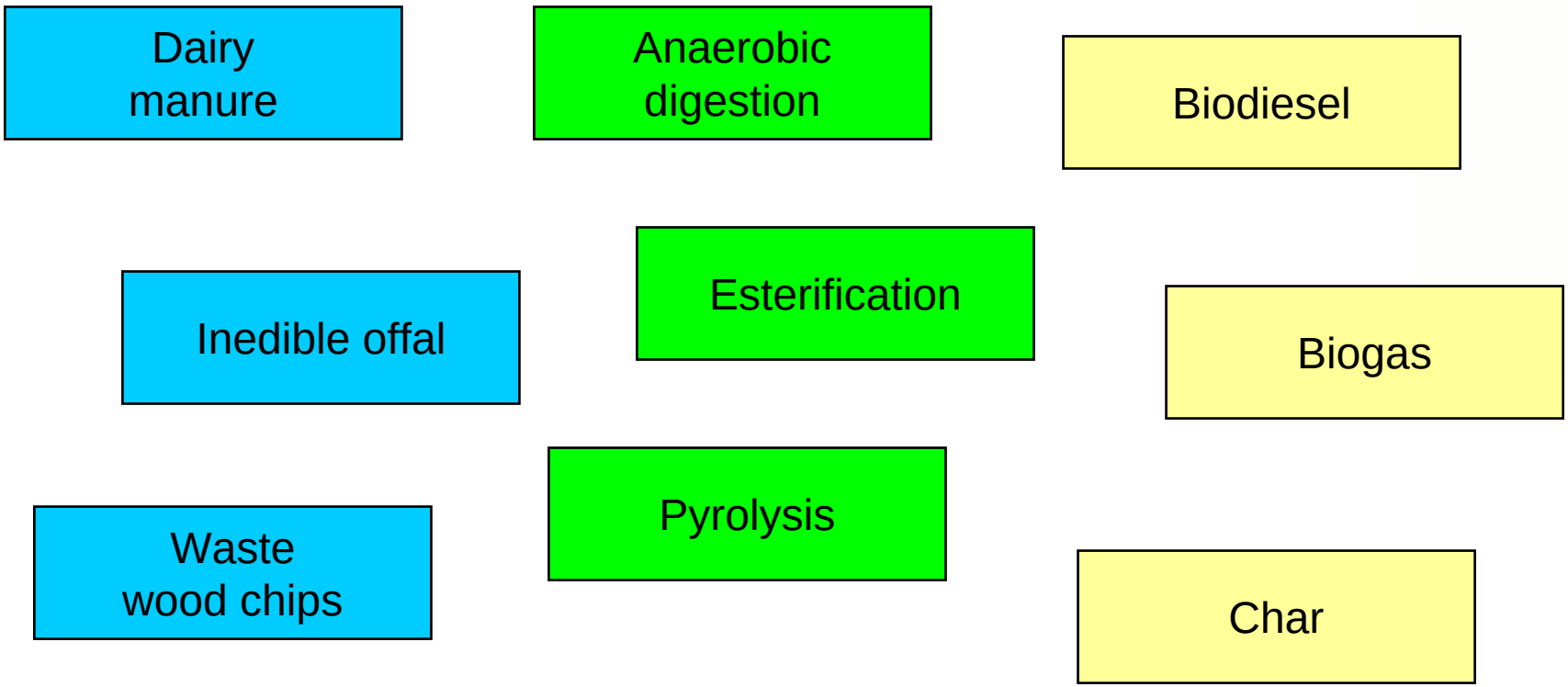
RPC: Resource-product chains



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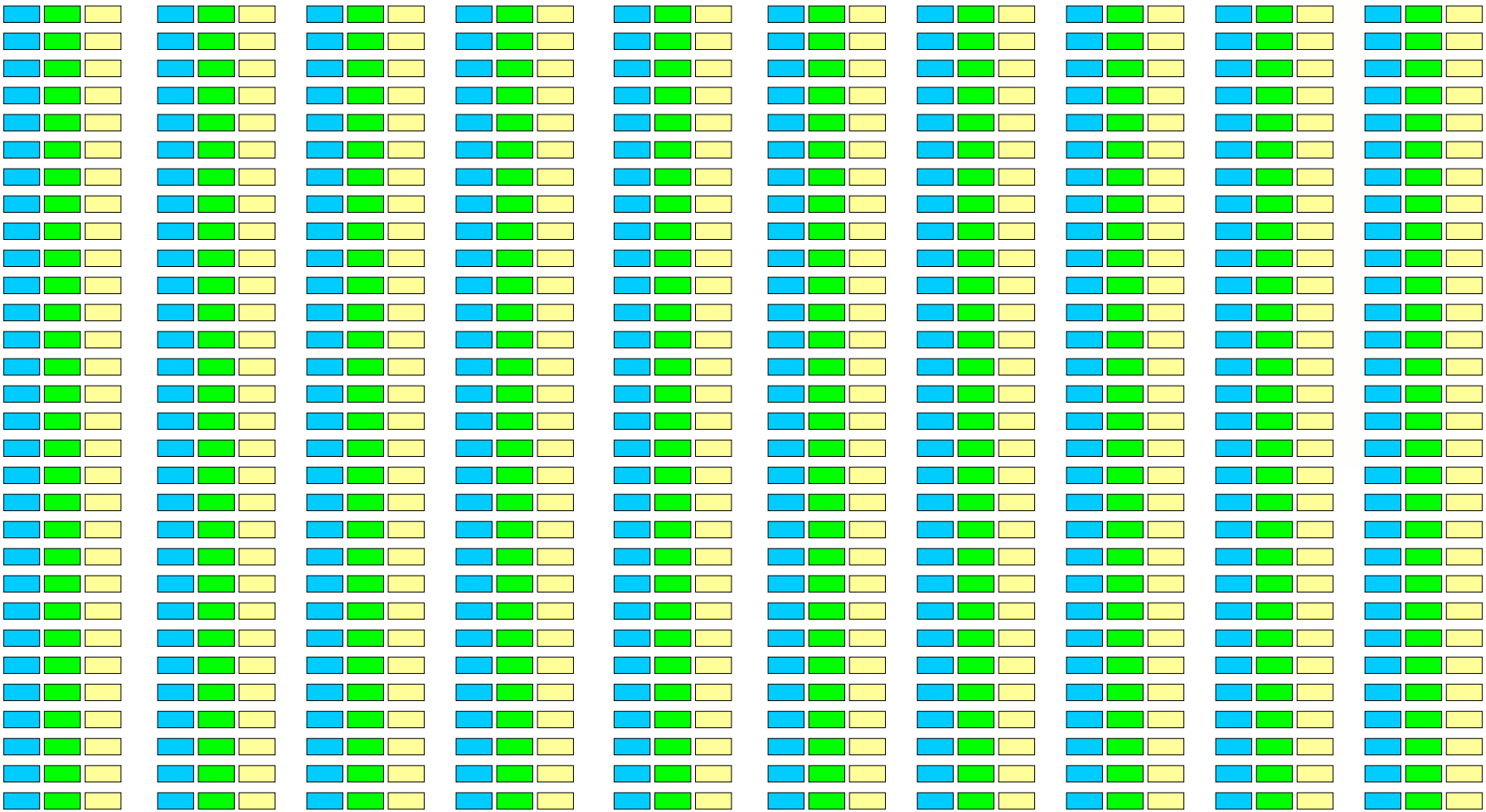
RPC: Resource-product chains



RPC Scoring

Dairy manure	Anaerobic digestion	Biogas
Forest residues	Fermentation of lignocellulose	Ethanol
Paper mill residue	Biomass gasification	Biobased syngas

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Cost per ton?

1: Essentially free
0: Low
-1: High

Dairy manure	Anaerobic digestion	Biogas	1
Forest residues	Fermentation of lignocellulose	Ethanol	0
Paper mill residue	Biomass gasification	Biobased syngas	1

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Commercial scale example?

1: Yes
0: Yes, but not with this feedstock
-1: None whatsoever

Dairy manure	Anaerobic digestion	Biogas	1
Forest residues	Fermentation of lignocellulose	Ethanol	0
Paper mill residue	Biomass gasification	Biobased syngas	0

Sufficient quantities?

1: Yes
0: Unknown
-1: No

Dairy manure	Anaerobic digestion	Biogas	1
Forest residues	Fermentation of lignocellulose	Ethanol	0
Paper mill residue	Biomass gasification	Biobased syngas	X

Process Suite: Fermentation of 6-carbon sugars and starches

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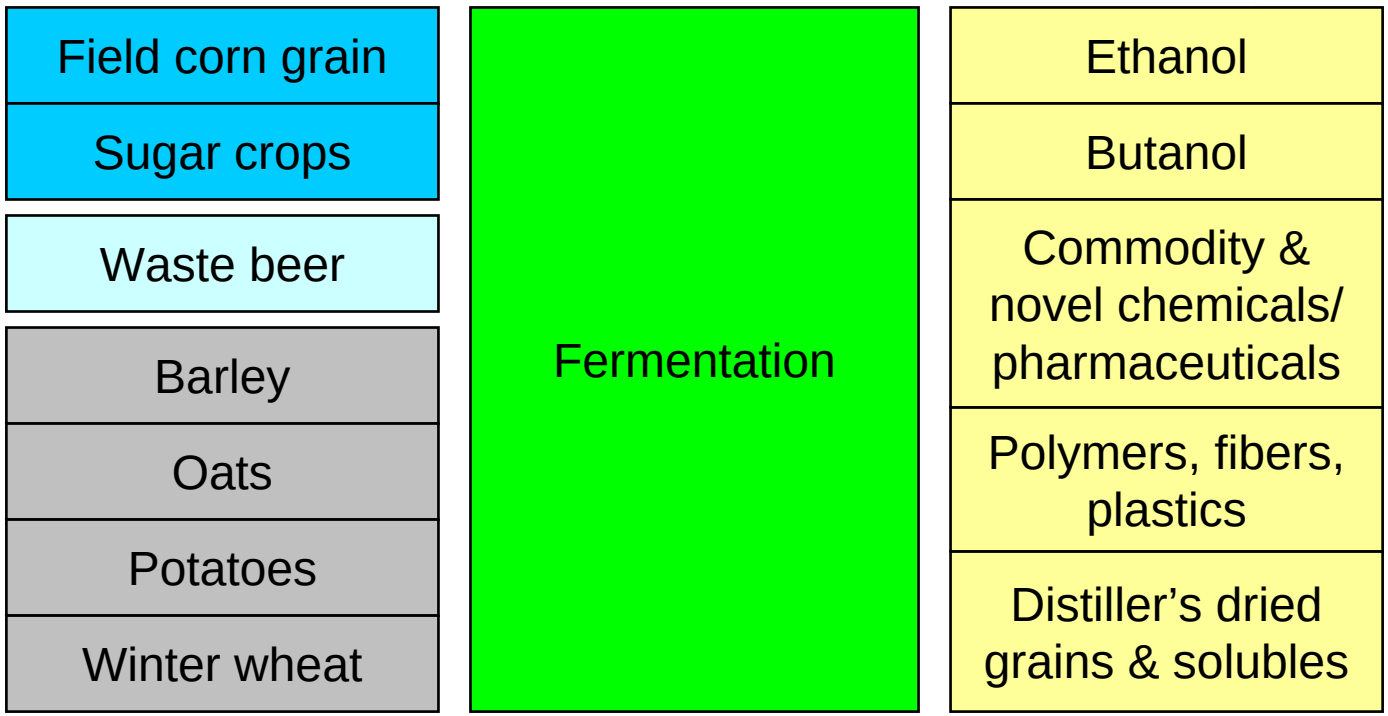
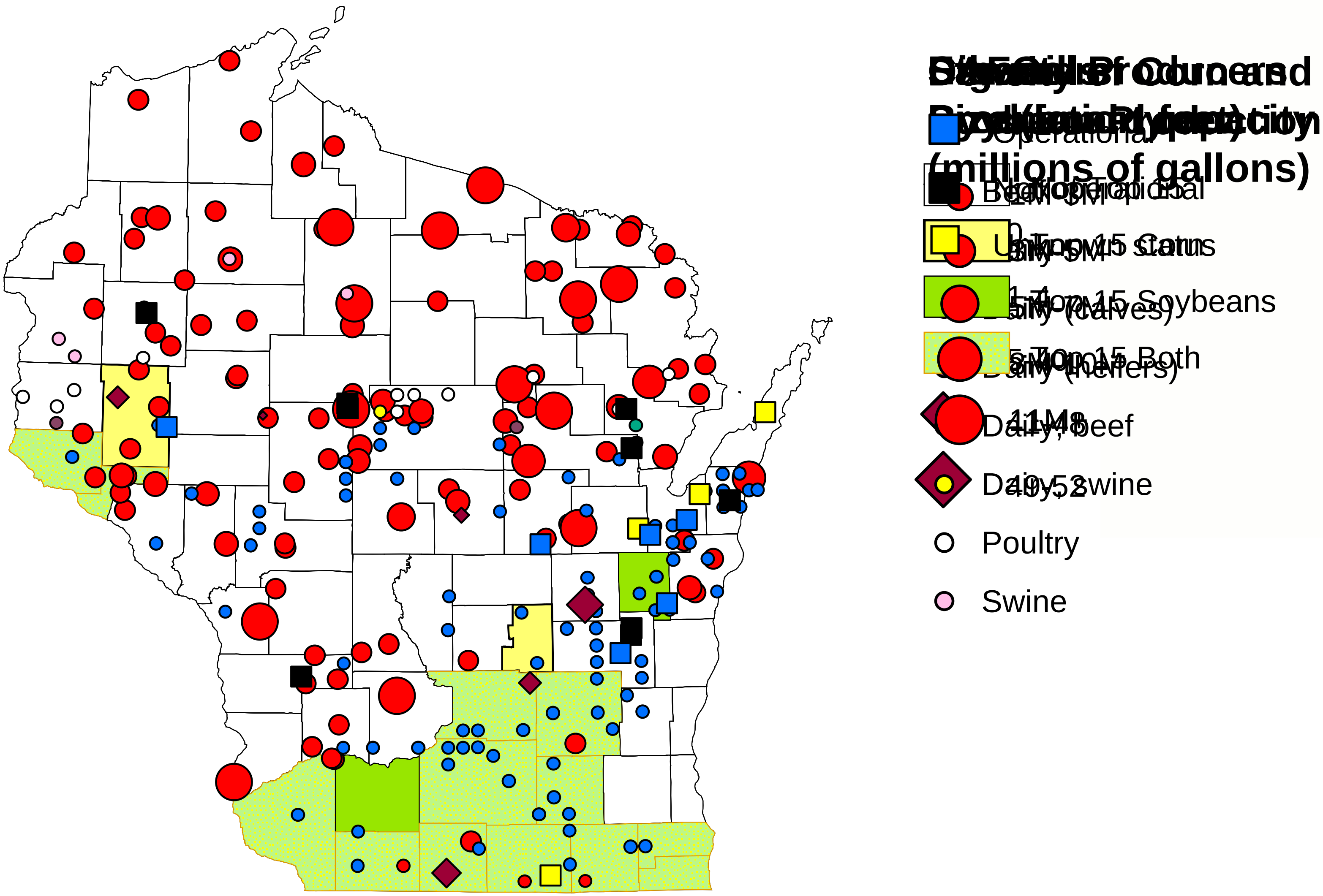


Phase Two Mapping



Phase Two Mapping

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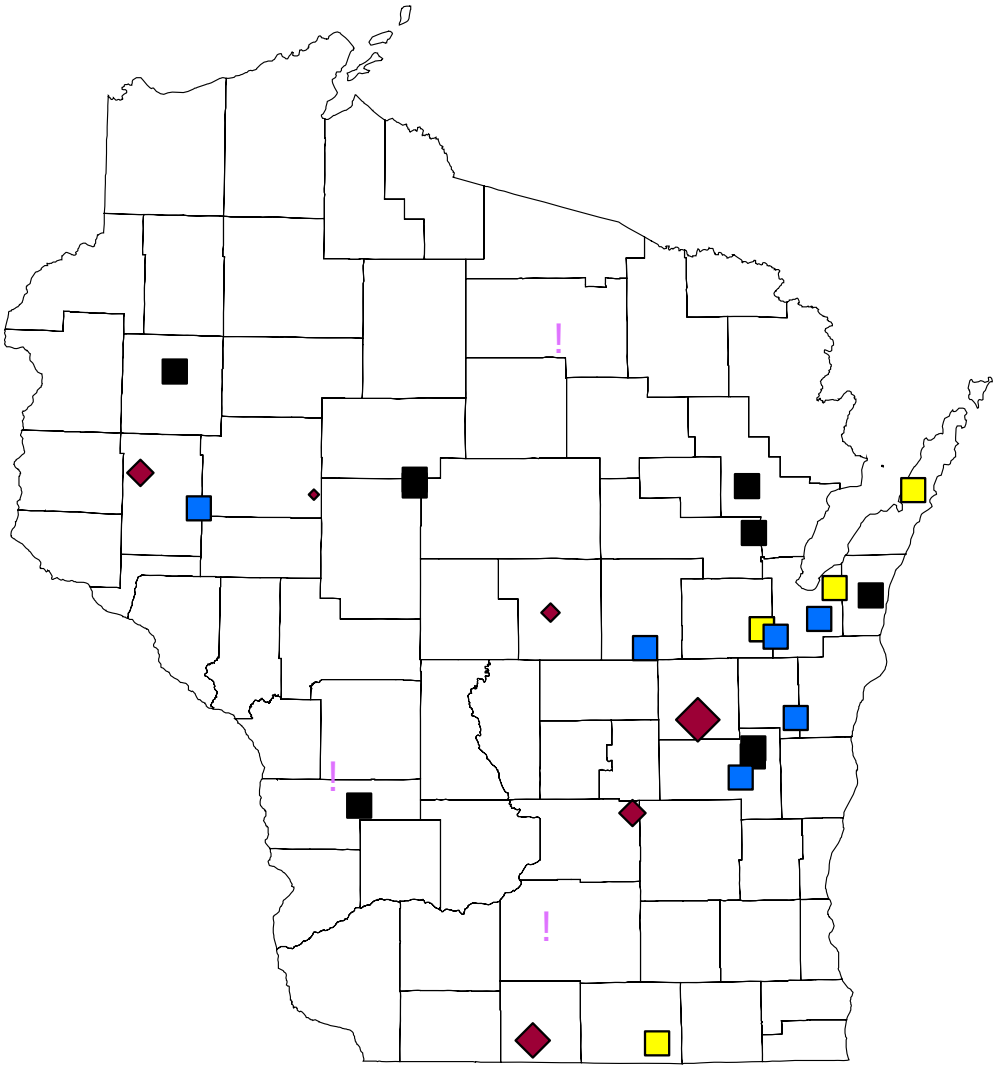

Biorefineries

! Biorefining hotspots

Digesters

- Operational
- Not operational
- Unknown status

Ethanol Producers Production capacity (millions of gallons)

- 0
- 1-4
- 5-40
- 41-48
- 49-52

Phase Two Interviews

- Some questions are only answerable by those who have done it
- Wisconsin's intellectual resource
  - Who should we talk to?
  - What should we ask?
  - What insights does the Consortium have to share?

Contact information

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www.wisbiorefine.org